Peaceful Nuclear Cooperation

U.S. Support for NPT Article IV

UNITED STATES & SENEGAL

Through the International Atomic Energy Agency (IAEA), the United States contributes to the work of many countries using nuclear materials and technology for peaceful purposes. In recent years, U.S. support has focused on achieving tangible and lasting benefits in fields that are vital to human development, including agriculture, human health, water resource management, and human resource development. Since 2000, the IAEA has approved and funded $4,637,906, including $285,314 in 2013, under its Technical Cooperation (TC) program for projects in Senegal.

The United States views its support for the peaceful uses of nuclear energy as a critical part of its efforts to strengthen the IAEA and the global nuclear nonproliferation regime. About 25% of the IAEA's annual budget for peaceful nuclear assistance comes from the U.S. In 2012, the U.S. contributed almost $22 million to the Technical Cooperation Fund and over $6 million in additional funding for training, fellowships, and cost-free experts.

In addition to these longstanding contributions to the IAEA's peaceful uses programs, at the 2010 NPT Review Conference, the U.S. announced a $100 million Initiative to further expand this support over the next five years. The U.S. pledged $50 million towards the IAEA's Peaceful Uses Initiative (PUI), focusing on human health, food security, water resource management, and nuclear power infrastructure development. The U.S. has already allocated over $27 million to specific PUI projects, and welcomes the contributions of Japan, the Republic of Korea, New Zealand, the Czech Republic, Hungary, Sweden, Australia, France, Indonesia, Brazil, Italy, the UK and Kazakhstan to this important Initiative.

NUCLEAR ENERGY

The need for electricity, economic competiveness and environmental considerations have increasingly led a large number of Member States to consider nuclear power as an energy development option and seek assistance from the IAEA.

1. *International radiation measurement exercise. Credit: Dean Calma/IAEA*
2. *Deep wells and diesel pumps are the water lifeline for many rural residents. Credit: David Kinley III/IAEA*
3. *Nuclear power plant. Credit: Petr Pavlicek/ IAEA*

Senegal is currently participating in a regional TC project sponsored by the United States to increase awareness of the requirements and challenges related to the feasibility of nuclear power programs. The project addresses regional priorities and concerns related to nuclear energy, including the requirements for conducting comprehensive studies to explore the feasibility of nuclear power, developing nuclear safety frameworks, and promoting regional cooperation and common understanding about major nuclear power issues, such as nuclear material, radioactive waste management, legal and safety obligations, human and financial resources, and reliable technologies.

RADIATION PROTECTION

Through U.S.-sponsored regional TC projects, Senegal is currently working to strengthen occupational radiation protection, radiation protection of patients during medical exposure, as well as control of public exposures.

NUCLEAR SAFETY

The use of nuclear technology has great potential to help shape the future of developing countries, but is not without some risk. In recognition of this, Senegal recently participated in a regional TC project funded by the United States to strengthen national regulatory infrastructures for the control of radiation sources.

Senegal currently participates in another regional TC project, also funded by the United States to maintain these regulatory infrastructures and enhance their effectiveness and sustainability.

Self-assessment and regional networking can also significantly contribute to strengthening national regulatory infrastructures, so Senegal is currently participating in a regional TC

project sponsored by the United States to improve the performance of regulatory systems and conform to the requirements of international standards through self-assessment and enhanced regional cooperation.

EMERGENCY MANAGEMENT

Radiation emergencies not only risk injury to individuals, but can also contaminate large territories and affect the living conditions of communities. Senegal is currently participating in a regional TC project sponsored by the United States to strengthen participating countries' national arrangements for response to radiological and nuclear emergencies and improve their compliance with international standards.

WATER RESOURCES

The sustainability of groundwater resources for drinking water supplies, agriculture, and industry is a prime concern for some countries, particularly those dominated by arid and semi-arid climates. Senegal is therefore participating in a regional TC project sponsored by the United States to promote the integrated management and sustainable development of the shared groundwater resources in the Sahel region.

AGRICULTURE

Through a project coordinated by the IAEA's Department of Nuclear Sciences and Applications and supported by the United States, the IAEA is contributing to agricultural development in West Africa through the control of tsetse flies and trypanosomosis. Under this project, a study to assess the feasibility of creating a sustainable zone free of the Glossina palpalis gambiensis (Gpg) fly in the Niayes area of Senegal was completed, revealing that the sterile insect technique (SIT) would be needed to eradicate the fly population due to the nature of the habitat. Trial releases to assess the performance of sterile male flies in various ecosystems in Senegal, as well as an assessment of the efficiency of one of the selected suppression methods have also been conducted.

HUMAN RESOURCES

To contribute to the manpower development of Member States' nuclear programs, the IAEA awards individual fellowships and organizes group training courses. Every year, numerous fellows and training course participants travel to the United States for training in various peaceful uses of nuclear technology.

Since 2000, the United States has hosted multiple training courses that included Senegalese participants in fields such as isotope hydrology, nuclear information processing, nuclear power and nuclear safety infrastructure, deterministic and risk informed decision making, and accidents and audits in radiotherapy. Training was also provided through the IAEA Fellowship Program to seven Senegalese, five of which were sponsored by the United States, in fields including plant breeding and genetics, animal diseases, contaminants and residues in food and the environment, micronutrients in nutrition, radiation medicine and health, and public exposure control.

Additionally, since 2000, seven U.S. experts have traveled to Senegal to collaborate through various IAEA Technical Cooperation projects. Topics included data management, vitamin A, and food supplements.

1. *Delivering water to neighbors by pushing makeshift carts. Credit: Juanita Perez-Vargas/IAEA*
2. *International radiation measurement exercise. Credit: Dean Calma/IAEA*
3. *2010 IAEA-Argonne regional training course on introducing and expanding nuclear power programs. Credit: Argonne National Laboratory*
4. *IAEA helps countries address insect pests. Credit: IAEA*

FOR ADDITIONAL INFORMATION, CONTACT:
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